Serial No. 10/598,107

PATENT
Docket No. 075954-010300
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AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended): A dihalide represented by the following formula:

[Formula 1]

(wherein R^1 and R^1 [[R^2]] represent a halogen, R^2 and R^2 represent an alkyl group or a silyl group having a substituent, and R^3 and R^3 represent a hydrogen or an alkyl group).

Claim 2 (previously presented): The dihalide group according to claim 1, wherein the silyl group having the substituent is at least one selected from the group consisting of $Si(CH_3)_3$, $Si(n-C_4H_9)_3$, $Si(t-C_4H_9)_3$, $Si(CH_3)_2$ (C_6H_5) and $Si(CH_3)_2$ ($n-C_{18}H_{37}$)

Claim 3 (previously presented): The dihalide according to claim 1 or 2 wherein the alkyl group is an alkyl group having a carbon number of 1-20.

Claim 4 (currently amended): A polymer compound having a structure represented by the following formula in its main chain:

[Formula 2]

$$\begin{array}{c|c}
 & OR^2 OR^2 \\
 & R^3 & R^3
\end{array}$$

(wherein R² and R² represent an alkyl group or a silyl group having a substituent, and R³ and R³ represent a hydrogen or an alkyl group).

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Claim 5 (currently amended): The polymer compound according to claim 4, which is represented by the following formula:

(wherein R² and R²' represent an alkyl group or a silyl group having a substituent, and R³ and R³ represent a hydrogen or an alkyl group, and n represents a polymerization degree and is 5-1000).

Claim 6 (previously presented): The polymer compound according to claim 4, which is a copolymer comprising the structure represented by the formula claimed in claim 4 and another structure.

Claim 7 (currently amended): The polymer compound according to claim 5 wherein the copolymer is at least one selected from the group consisting of the following formulae:

[Formula 4]

(wherein R⁴, R⁴, R⁵ and R⁵ represent an alkyl group),

(Formula 4)

(wherein R4, R4, R5 and R5 represent an alkyl group),

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[Formula 5]

$$(\mathbb{R}^{3} 0) \mathbb{R}^{3} (\mathbb{R}^{3} \mathbb{R}^{7} 0)$$

(wherein R⁶ and R⁶ represent an alkyl group or a silyl group having a substituent, and R⁷ and R⁷ represent an alkyl group),

[Formula 6]

(wherein R⁶ and R⁶ represent an alkyl group or a silyl group having a substituent),

[Formula 7]

$$(\bigcap_{R^{s}0}\bigcap_{0R^{\theta'}}^{R^{1}}\bigcap_{R^{s}}^{R^{1}})$$

(wherein R⁶ and R⁶ represent an alkyl group or a silyl group having a substituent, and R⁷ represent an alkyl group), and

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[Formula 8]

(wherein R7, R7, R8, R8, R8, R9 and R9 represent an alkyl group).

Claim 8 (previously presented): The polymer according to claim 4 wherein the alkyl group is an alkyl group having a carbon number of 1-20.

Claim 9 (currently amended): A method for producing a polymer compound, in which a polymer compound as claimed in claim 4 is obtained by dehalogenation -polymerizing a dihalide represented by the following formula:

[Formula 1]

(wherein R^1 and R^1 [[R^2]] represent a halogen, R^2 and R^2 represent an alkyl group or a silyl group having a substituent, and R^3 and R^3 represent a hydrogen or an alkyl group).

Claim 10 (previously presented): The method for producing a polymer compound according to claim 9, wherein the dehalogenation-polymerization is performed in the presence of palladium or nickel compound.

Claim 11 (previously presented): A thin film obtained by using polymer compound as claimed in claim 4.

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Claim 12 (previously presented): The method of claim 9 wherein the silyl group having the substituent is at least one selected from the group consisting of $Si(CH_3)_3$, $Si(n-C_4H_9)_3$, $Si(t-C_4H_9)_3$, $Si(CH_3)_2$ (C_6H_5) and $Si(CH_3)_2$ ($n-C_{18}H_{37}$).

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Claim 13 (previously presented): The method for producing a polymer compound according to claim 12, wherein the dehalogenation-polymerization is performed in the presence of palladium or nickel compound.

Claim 14 (new): The polymer compound of claim 4 wherein the polymer compound is soluble and has at least one of a heat resistance, electrochemical activity, and fluorescence.

Claim 15 (new): A method for producing 2,7-dibromo-trans-9,10-dihydrophenanthrene-9,10-diol, which comprises the step of adding titanium tetrachloride and zinc to 4,4'-dibromo-biphenyl-2,2'-dicarbaldehyde.